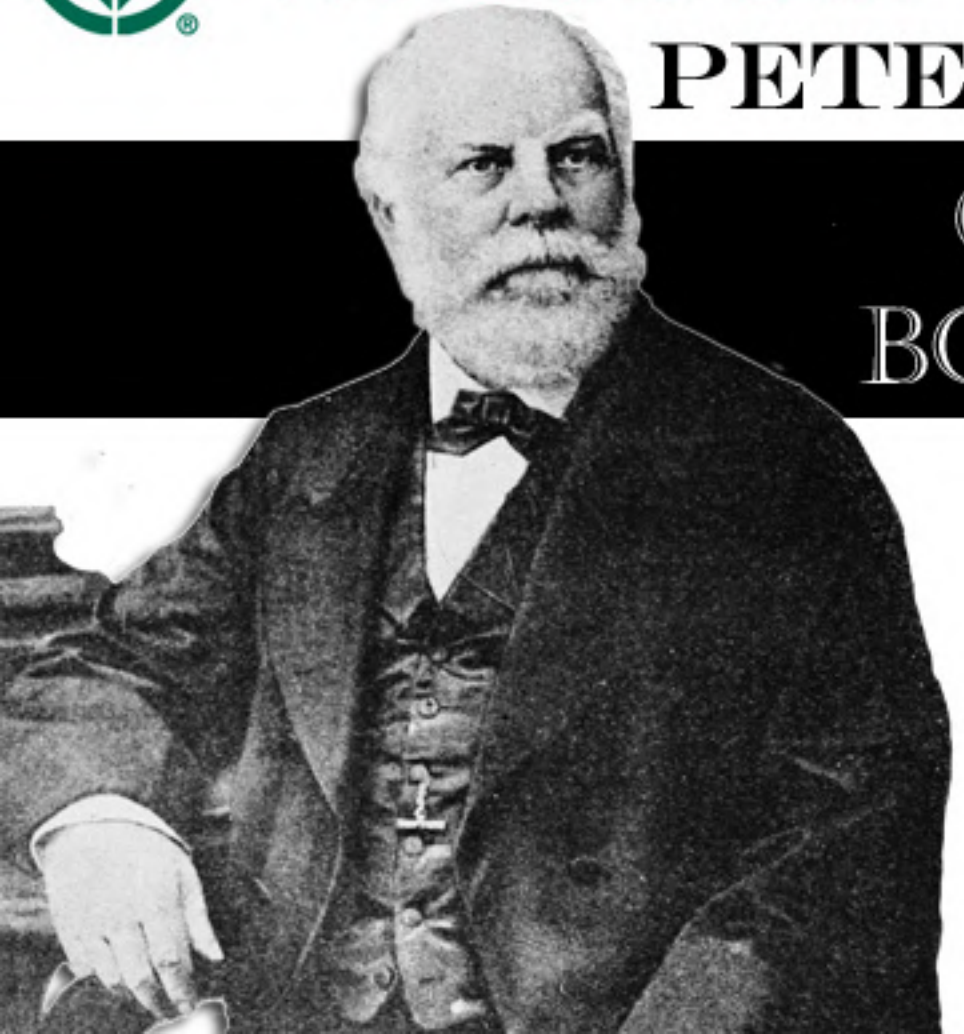
# Missouri Botanical Garden

## Peter H. Raven Library

# George Engelmann Botanical Notebooks



*Pagination Note:*
*Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.*

At Hanke's, Pray July 10th 1869

Echin. Pottsii Seedling, from Lonke globose, 8 inches high and in diameter, ribs originally 8, now beginning to form new ones of which 3 are fond in summit.

Ribs on old part almost obliterate, and grooves marked only by a shallow furrow. New Ribs more compressed, thick obtuse and grooves deep and sharp

Areolae 2 inches apart

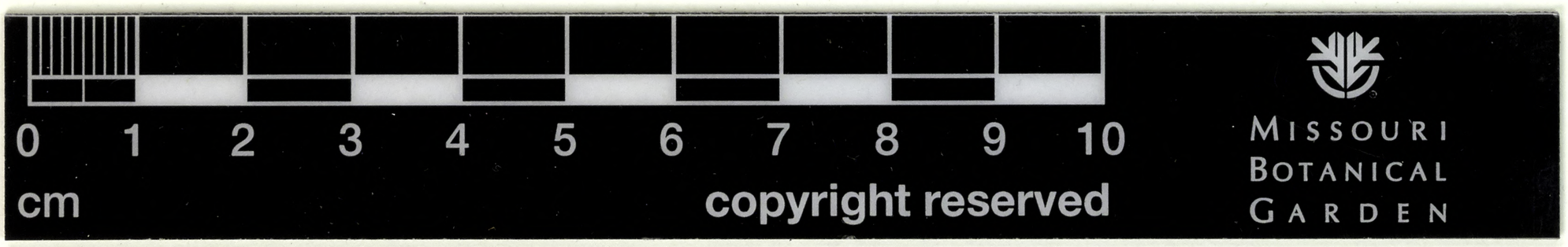
Spines numb 6 radiate annulate

1 stouter central one

all slightly curved backward, central one slightly upward

common ten nine

1415



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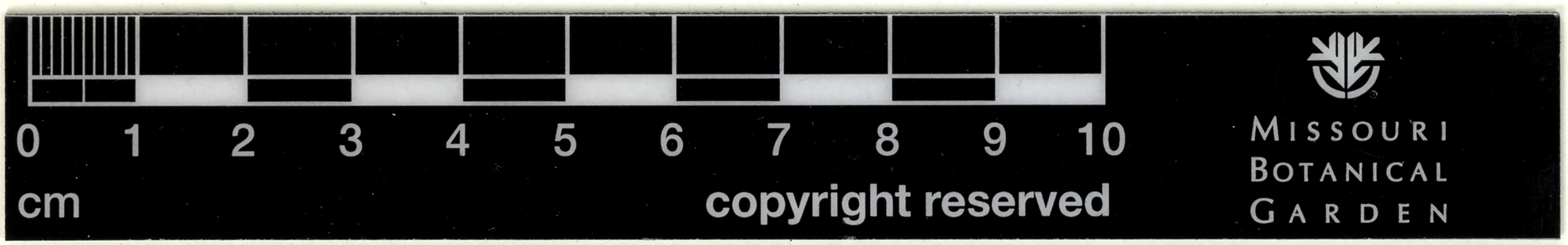
GEORGE ENGELMANN PAPERS



Dr A. Webers mss.
Mart. 187[illegible]

Echinocactus Pottsii Salm

un exemplaire de 0m,30 diamètre, sur 0m,22 haut,
a fleuri en Juillet 1872 chez Mr Pfersdorff à Paris.
C'est sur lui qu'ont été prises la description et
le dessin ci-joints.

Salm 5–6

Aréoles distantes de 0m,03, garnies de tomentum
court, jaunâtre; prolongées en dessus.

Aiguillons jaunes, les jeunes rougeâtres à la base,
droits, très pointus, légèrement annelés;
disposés selon le schéma ci-contre:

1 central, long de 0m,03
5 extérieurs, longs de 0m,02

Dans le prolongement supérieur de l'aréole,
2 ou 3 glandes cornées sont cachées dans le
tomentum.

Salm 9

Fleurs sortant au nombre de 7 du sommet de
la plante, longues de 0m,05, sur 0m,06 – 0m,07 diam.
jaunes.

Ovaire d'un vert clair, couvert de squames
triangulaires-arrondies, vertes à bords jaunes.

Tube épais, charnu, court, garni de dépôts
allongés, linéaires, jaunâtres à ligne médiane
rouge très large sur la partie dorsale, de
sorte que la fleur fermée à demi-jaune apparaît
presque rougeâtre. Pétales au nombre de
30 à 35, disposés sur deux rangs, étroits
lancéolés presque linéaires, un peu érosulés vers
la pointe, d'un jaune paille foncé, rubescents
à la pointe.

Etamines nombreuses à grêles, dressées autour du style;
filets rouge carmin foncé, anthères jaunes
Style columnaire, canaliculé, jaune, divisé
très profondément en 12 stigmates

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1416

ex Salm-Dyck in Allgem. Gartenzeitung
1850 pag. 394

~~Forbes~~ Salm.

5.) Echinocactus Pottsii

E. caule globoso subglauco glaucescente-nitido 12-costato, costis latis crassis obtusis obsolete sinuato-repandis, pulvillis valde remotis grisco-tomentosis conniventibus; aculeis exterioribus 8 radiantes patentissimis recurvulis centralique solitario porrecto, omnibus validissimis annulatis pallide fusco-stramineis.

Der Stamm stark, bis jetzt jedoch nur 6 Zoll hoch und 5 Zoll dick, ist oben nabelförmig eingedrückt, ganz glatt, glänzend und grau grün. Die Rippen sind fleischig, breit, durch oben scharfe, unten abgeplattete Buchten getrennt, an dem Stamme abgerundet, unter den Stachelkissen wenig erhöht, und zwischen denselben ausgehöhlt. Die Stachelkissen stehen 2-2½ Zoll auseinander, sind kreisrund, nach oben ein wenig verlängert, erhaben, mit grauem Filz überzogen. Die Stacheln sind sehr stark und steif, geringelt, schmutzig strohgelb, die äussern 1 Zoll lang, die stärkern Mittelstacheln 1½ Zoll messend.

Ich habe diese Art zu Ehren des Herrn Potts, des eifrigsten Cacteen-Sammlers benannt. Sie muss ihren Platz zwischen E. californicus und E. electracanthus nehmen. Von ersterem unterscheidet sie sich durch ihre stets bestimmten 9 Stacheln, die alle von gleicher Farbe sind, während E. californicus deren nur 8 hat, von welchen die beiden oberen und 3 unteren, nebst dem Centralstachel, purpurroth sind, und die beiden Seitenstacheln strohgelb; von dem zweiten aber (ebenso wie von E. Echidne) ist sie durch die abgerundeten stumpfen Rippen und geringelten Stacheln verschieden.

Von H. Potts 1850 aus Chihuahua eingeführt.

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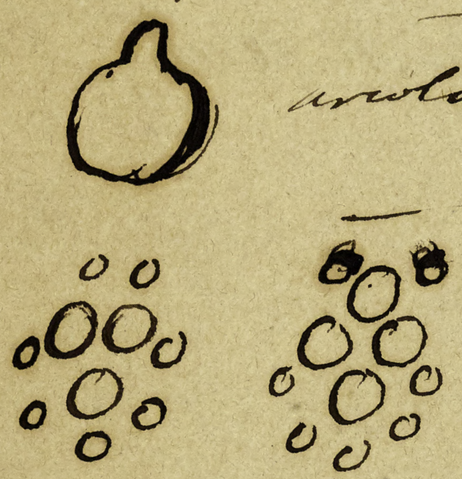
No 267. Echinocactus Pottsii Salm Living specimen, 13 ribs, 5-6" high and ~~6~~ or 7" in diameter; Ribs obtusish and minute areolae round with the short round florriferous areola attached; 1/2 - 2 inches distant from one another. Grooves deep.




radial spines 7, or ~~6~~ inferior central one usually 3 sometimes 4 — these central sp. stouter, annulated 1/2 inches long. — I have obtained from Mr ~~Potts~~ Scheer a bunch of spines of a dead specimen which he is positive belongs to the same species, with 1 central and ~~7~~ radial spines — Spines always straight and remarkably rigid, giving the plant an unapproachable appearance. —

at F Scheer's, Nbth fleet Kent
Aug 22 1857

1417

Ech. Pottsii" an old original specimen
13 ribs globose 10-12 inches diam, 8 radial
1 central spine, horn-coloured, nearly
straight, slightly ribbed, all nearly
equal, 1 1/2 inches long; areolae flori-
fera glanduliferous —

Hort Cels, Paris 18/3 69

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252 B. Mann seems t[illegible]

and is probably the plant known to me
as *Arctostaphis* . Manullae short, compressed,
spines stout. dead specimen 5 inches
diameter, globose. — (at F. Scheer's Aug 22 1857)
North fleet, Kent

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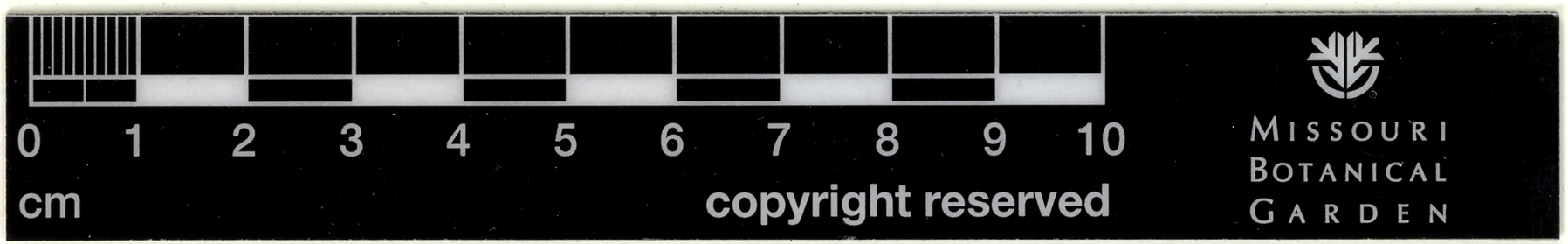
Hort Dyck 1857

Ech: recurvatus pl. 6 fig. (original specimen at Jacobi's Cologne) has elongated areolae, 4 central spines, the lower flat or rather angular and compressed, curved and almost hooked; usually 2 upper and 3 lower radial spines, the lowest being the smallest; sometimes 3 upper and at other times 4 and even 5 lower ones are to be found 1418

the margin of the areolae is upwards surrounded with short curly hair like spines — an analogy to E. Wislizeni



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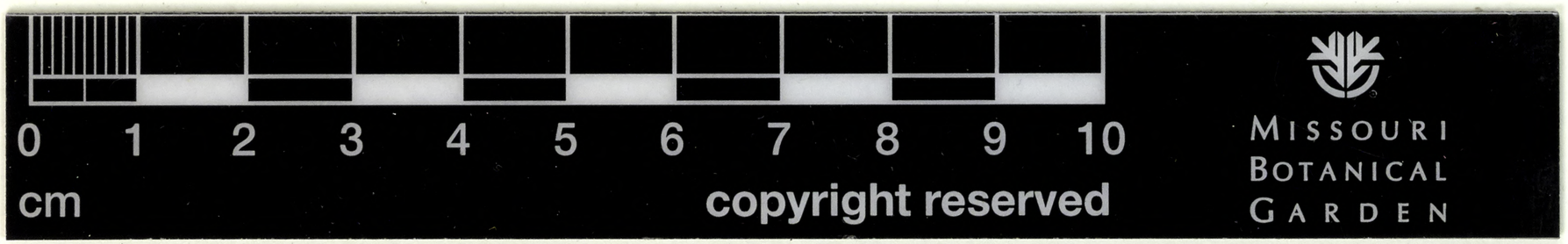


May 1871

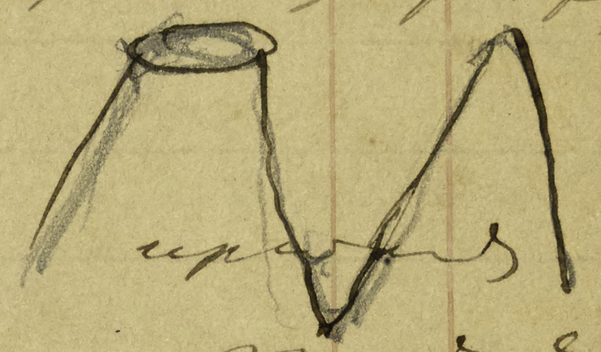
1419

*Echinocactus polycephalus*

Arizona & Colo ~~Mts 1870~~ ~~Colorado~~ Dr CC Parry ~~Feb 1871~~

6 or 7 inches high (only 4 inches above the ground, but all still covered with spines) 5/2 inches diam 15 acute somewhat retuse ribs, rounded grooves below sharp & deep on young part of plant

glaucous.




Areolae large rounded at last oval, ~~0 0~~ 1/2 inch in longer diam 1 1/2 inches apart.

Spines 7 radial 1 central, all flattened, annulated, at first reddish, then reddish ashy; 3 upper radial bag fan especially uppermost as the lowest, as well as the central one 3–4 inches long, 4 lower radial weaker, only 1–2 inches long;

Hes 5352-7

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usually with several heads

Echi. polycephalum Eng & Bzg. often over a foot high, lax
with very stout annulate cuneate spines, & early flow,
the base of shoot is enveloped in dense cotton, for the
Mohave Regn, may probably be fig 1420 in south Utah.

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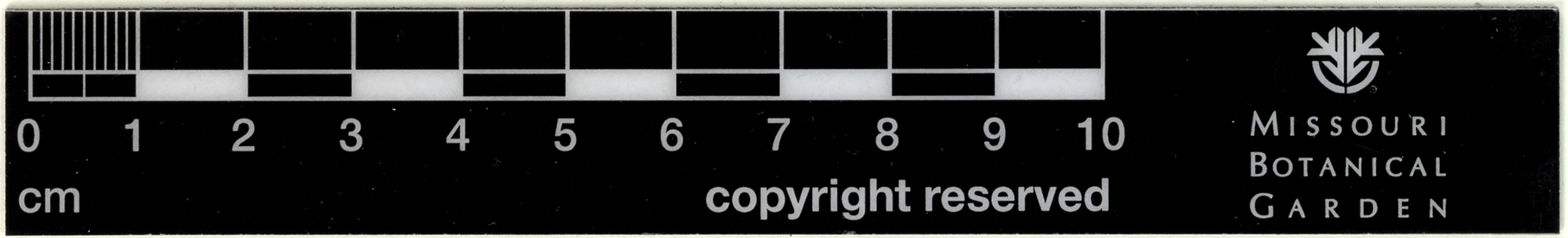

14 - 1

Bigelow lg. 1853

Rocktr del 1817

Echin & Polygraphicus

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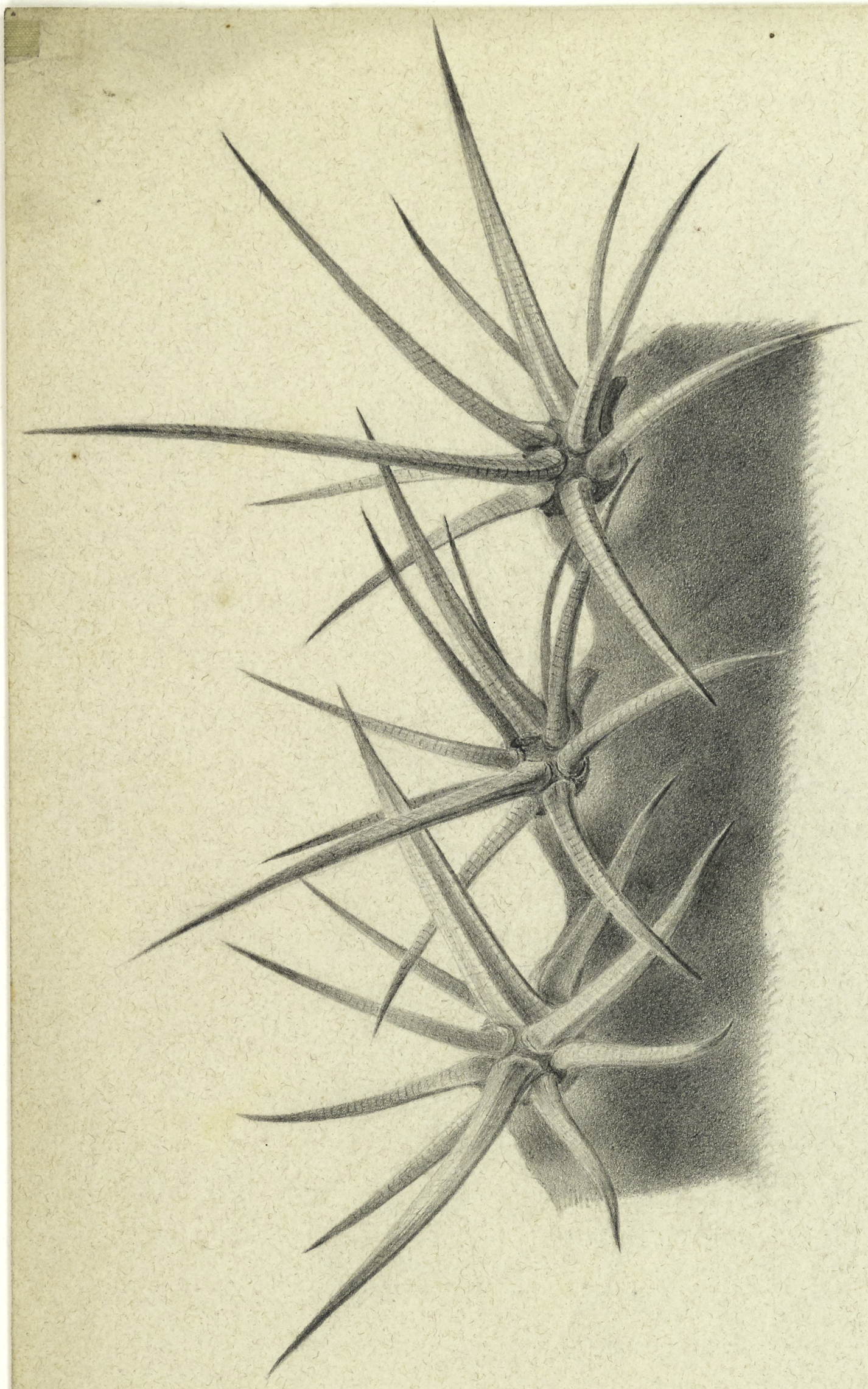
E. E. Echinopsis



Echinocactus polycephalus

Dr Bigelows original specimen

T. Rocktus del 1855

1422

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Box 4
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Notebook 6, F9

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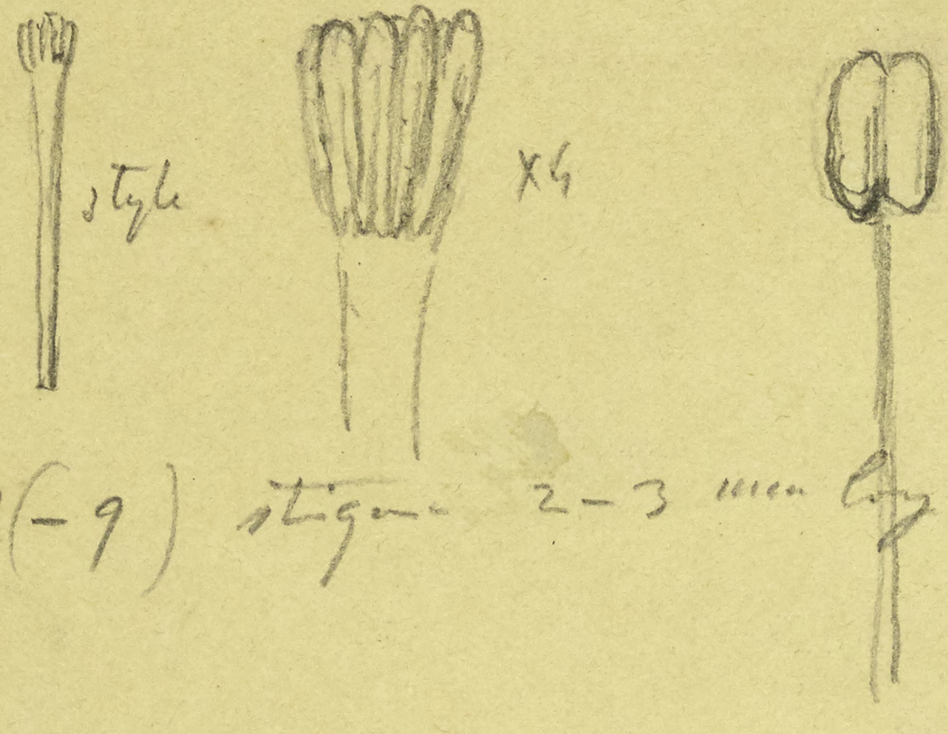
Lehua polygrapha

60 miles south of St George

May 7 1877

April 1876




& (-9) stigma 2-3 mm long

1423

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Leitch & Corlies

DRUGGISTS

South West Corner Fifth and Market Streets.

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Echin. polycephalus

July 3 1872

Ferd Bischoff, Lieut Wheeler's Expd. 1871
Arizona

nectary 4 mm long
Stamens
part of tube 12 "
petals 25 "
yellow
sepals red spinescent

anther x10

×2

style ×2
10–12 stig–

1424

Pollen x415




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# ALEX. LEITCH,

## APOTHECARY & PHARMACEUTIST,

Marble Building Cor. Fourth & Olive Sts. St Louis, Mo.

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cm 0 1 2 3 4 5 6 7 8 9 10
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Echin. polycephalum
Colorado Desert

Nov 10 1877

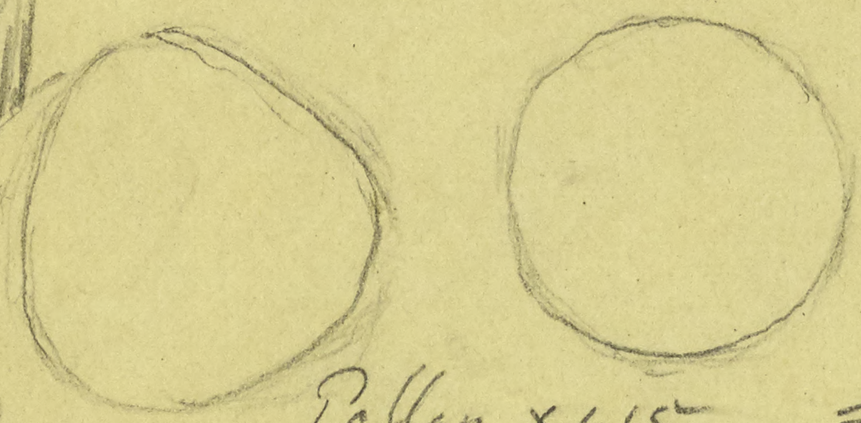
×10

× 2

style × 2

10 stigmata

Brewer mis
1873



Pollen × 415 = 0,048 mm
perfectly smooth, oft roundish triangular

From remnants of flower
on top of fruit, sunken

stamina 3 mm long
anthers part 12 mm
style 18 mm
(branches 6–7 mm)

1425

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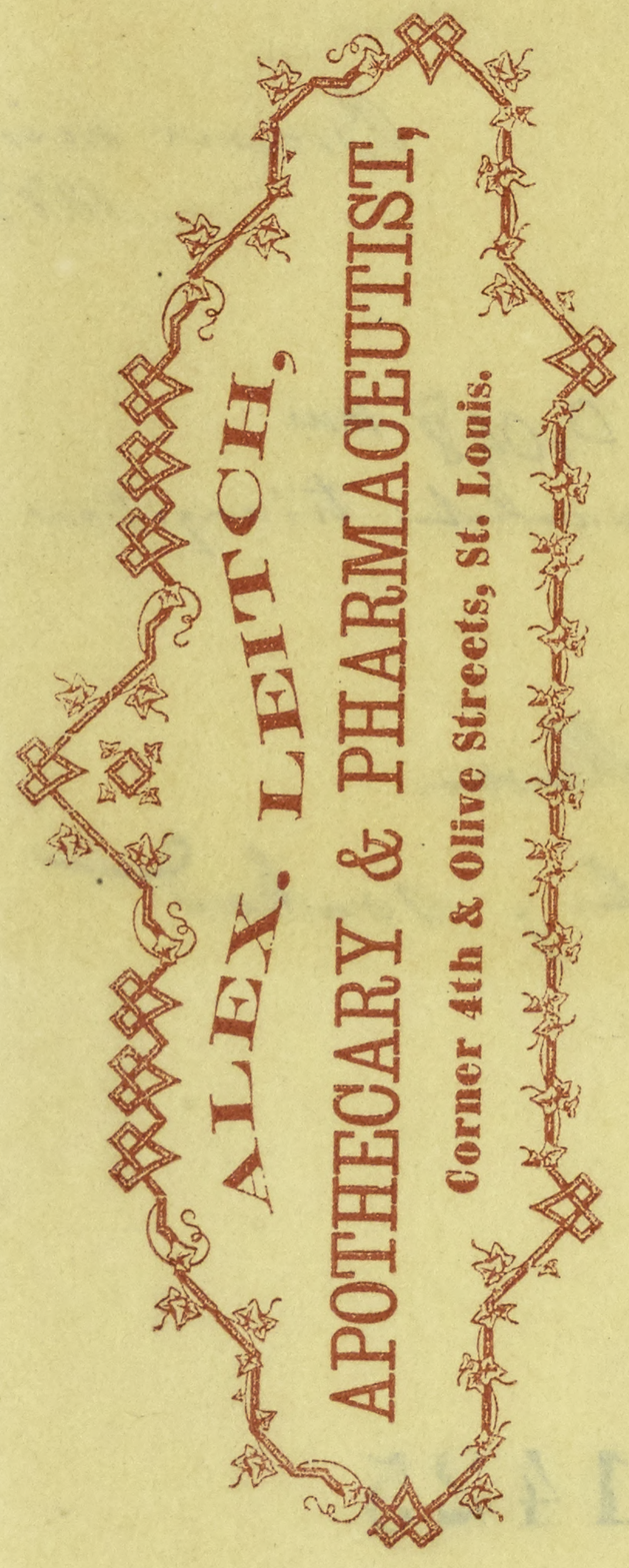


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Ech. Pfeifferi, the original species. 1½" high, oval; 13–15 very sharp compressed ribs glaucous; areolae elongated, almost touching one another, or contiguous; six radial, no central spines the lowest a little longer and stouter than the others — all yellow straight or slightly curved, pectinate. Munich. Nov 1857

1426 for flower see note from Jussieu's Mss

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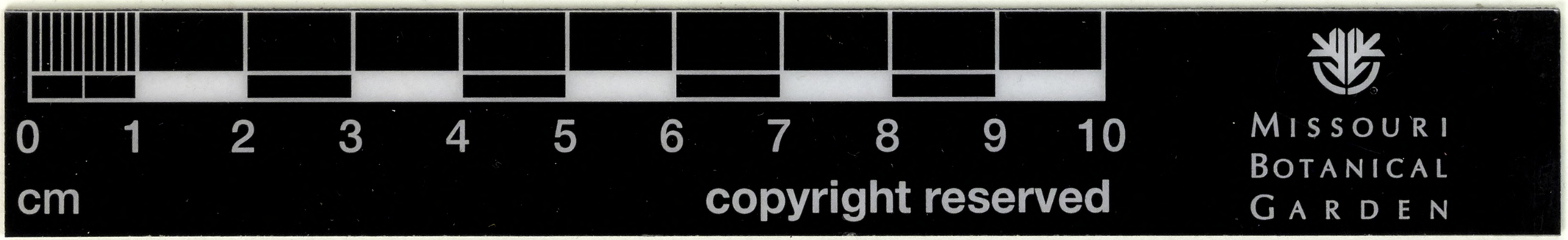

1427

*Ech. robustus* 4 annulate rectal spines, stout;
radial spines about 16 very thin, upper ones retrorse
& flexuous. — Aut Schaefer, Münster Jan 1857.

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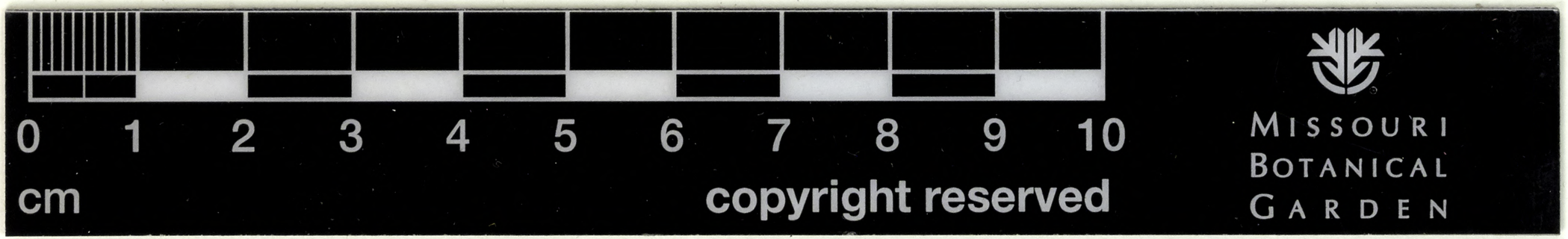


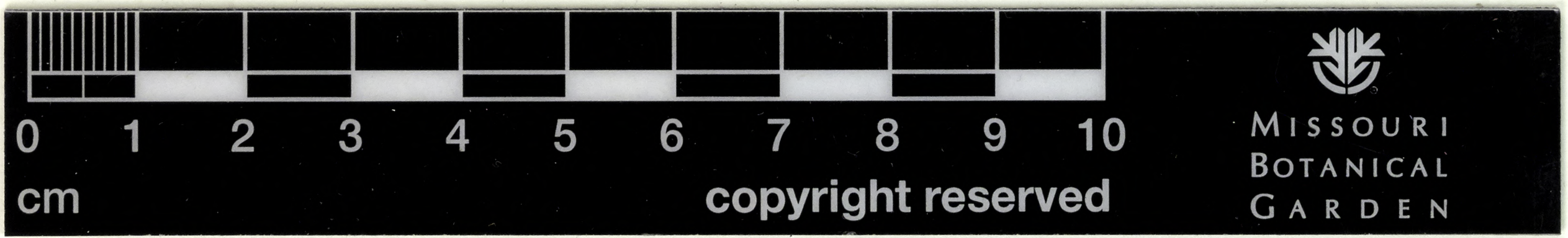
Kew Sept 1869

E. rhodophlebium. Bot Mag. 4486 1428 Sin Louis Potosi

purple flowers 8c diam. ovary & tube

with uniform sepals (perigon?)

10 yellow
ellow, tigmata



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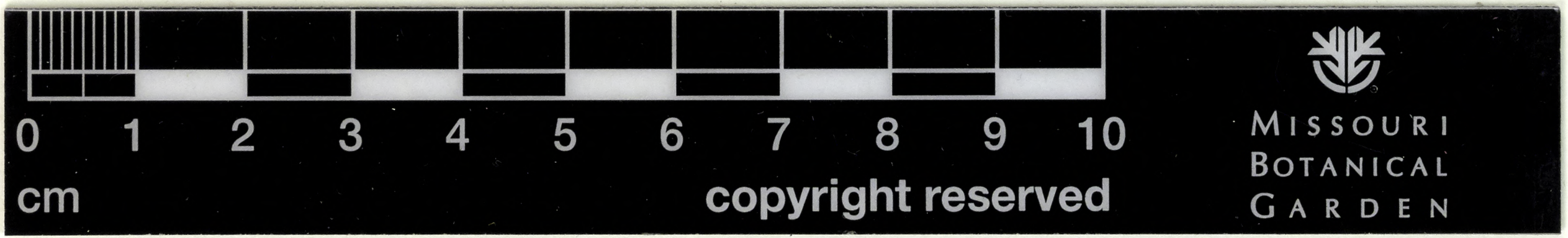

1

*Echinocactus robustus* Hort Dol Berlin Jun. 1869.

ovatus 10" alt. 8 costat. – cost. tuberculat.

areol. ovatis densis.

1429

5–6 or more upper radial spines flexuous like the analogous ones of *E. Wrightii*

4 to 6 larger ones are annulate.

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Lk & Otto at Guadeloupe & Desirade 5 & 6 1869

Echinocactus recurvus (= Mammillaria recurva)

a young globose plant, grafted, shows at its lower part the Mammillaria shape very strongly;

the tubercle, 3/4 inch long or more bears, below the areole a terete subulate leaflike persistent projection, which is terminated by a deciduous bristle

In this specimen of most vigorous growth these tubercles soon unite into ribs of which 13 are already well and fully formed, bearing the large characteristic spines

Specimen 6 1/2 inches over 3 inches in diameter

1430

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Coll. of dead C

spirales Kan

-8 inches hig

centre flat

stout flat o

weakest sh

The 3 upper

and when

developed

centred

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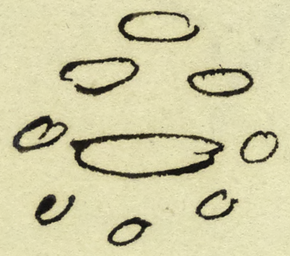
Coll. of dead Cacti Hab veg. Monc. Nov 1857

Echinocactus spiralis Kans. mss. Mexico



6–8 inches high. 13 ribs,
1 central flat hooked spine, 3
upper stout flat ones, 2 lateral weaker
3 lower weakest shortest but all
stout. — The 3 upper spines look like
Central ones, and when the plant gets large
may by the development of upper radial
spines become central — Ribs acute

1431

and other characters — arcuata

Mam. arcuata
Kunowski —
M. scolymoides.

[arcuata ?]
seems to be

Martinis Mexico.
M. convexa Lem

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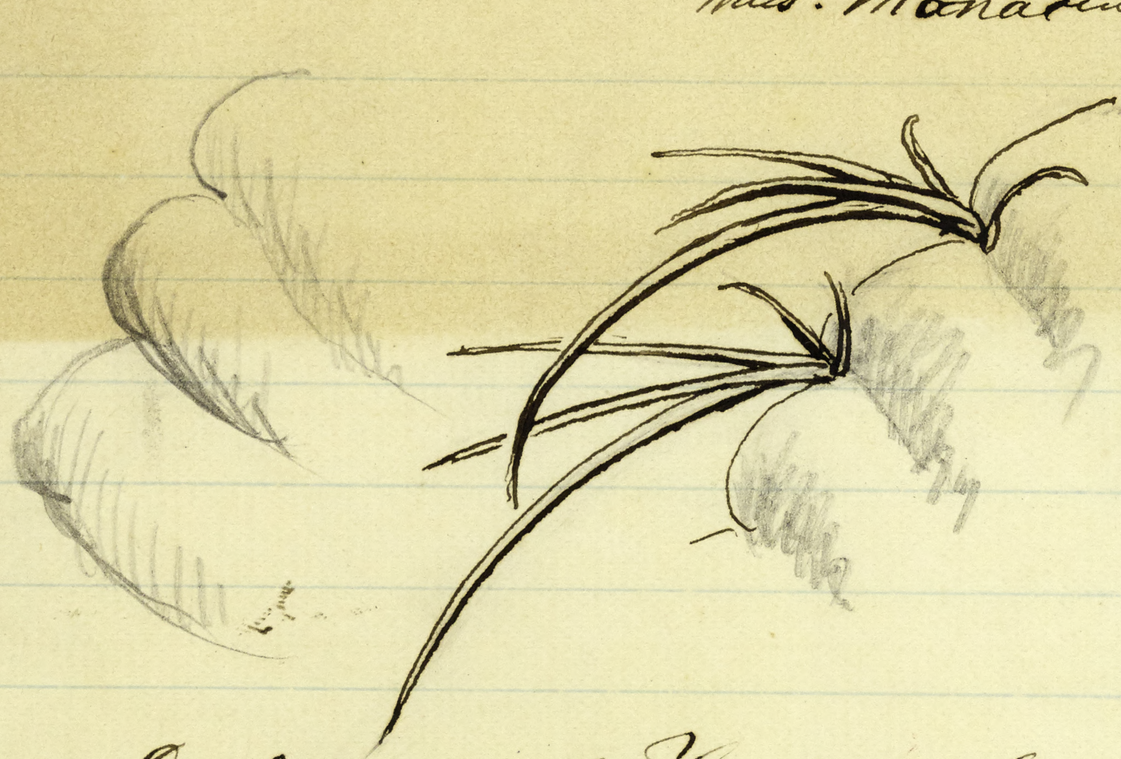
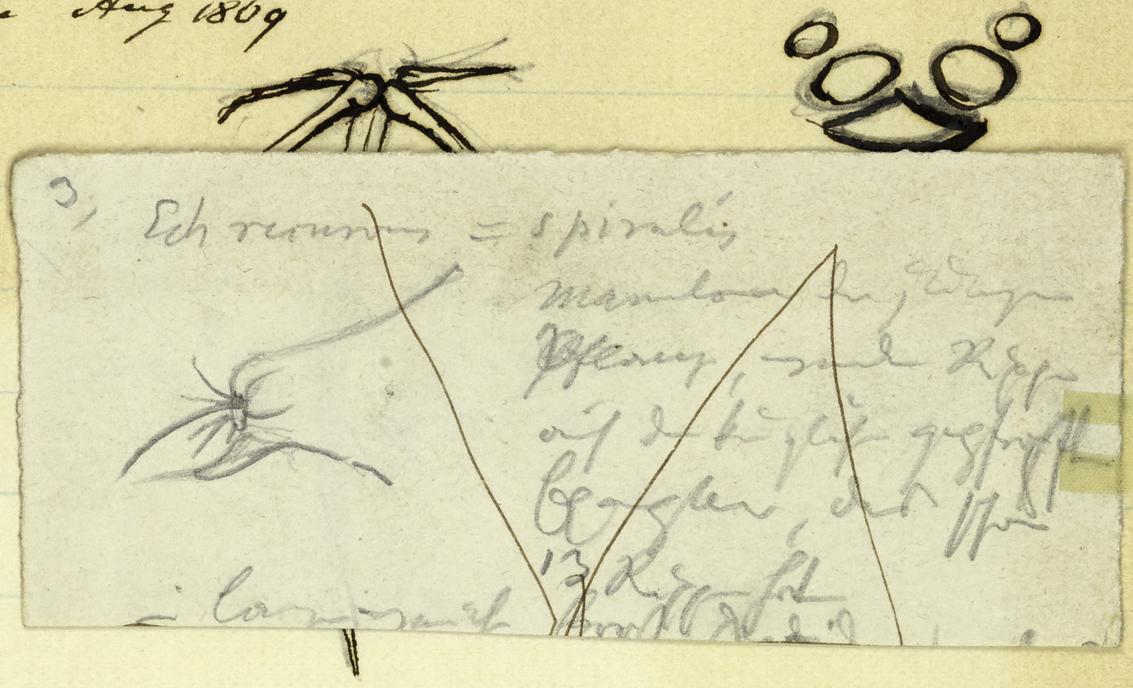
Echinocactus spiralis Karwinski !

1432

Original specimen, seen from above
Mus. Monacense Aug 1869






Head original Plant oval, 6 inches diameter, 13 ribs spirally twisted, ribs notched, or interrupted,

Spines only ii 5; lowest one broad curved downward, annulated towards tip; lateral pair smaller, upper pair smallest.

Fleisher (Beschreib. Cact p. 60) descr. 4 forms of 7-8 radial and 1 central, robust, flat, hooked spine. (= young plants, seedlings ?)

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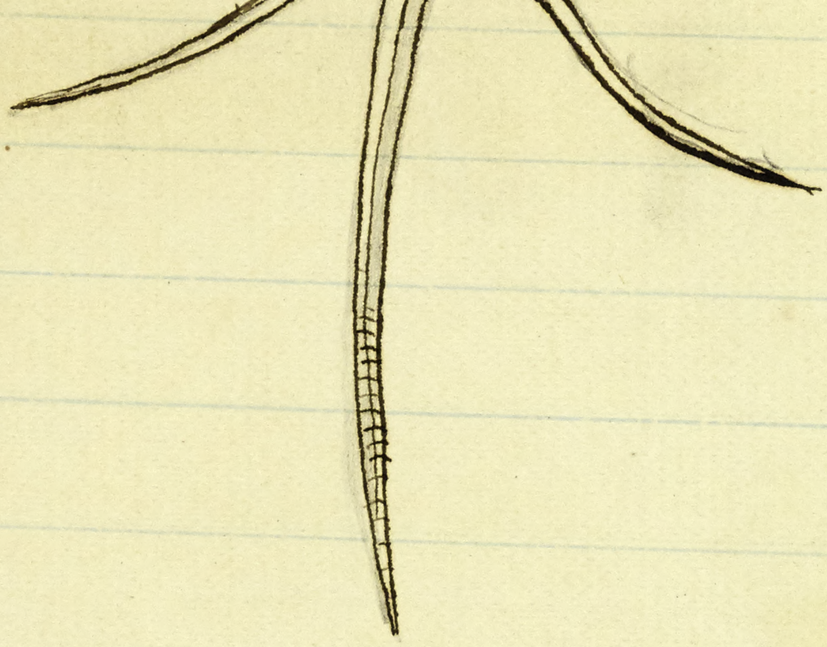

6 inches diameter, 13 ribs
ribs notched,

5; lowest one broad curved
ulated towards tip; lateral
, upper pair smallest.
. Cast p. 60) dorsal spikes of
ntral, robust, flat, hooked spine.
seedlings ?)

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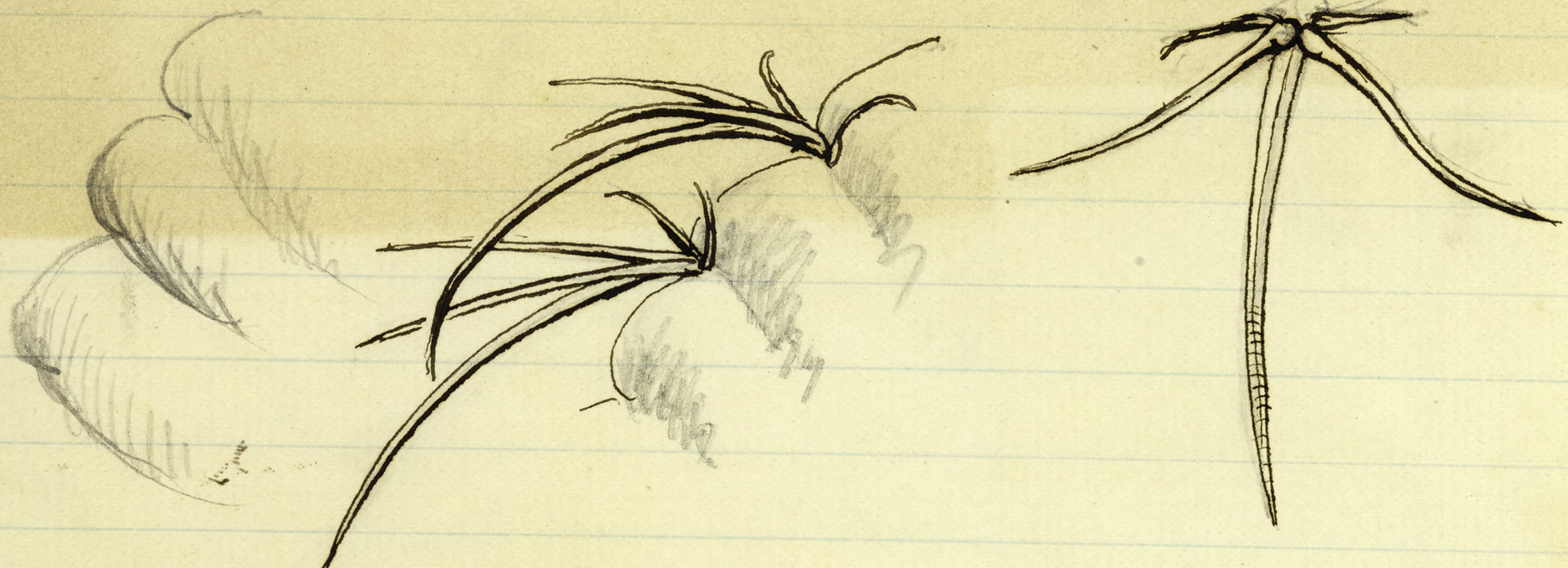
Echinocactus spiralis Karwinsk. !

1432

Original specimen, seen from above
Mus. Monacense Aug 1869



Dead original Plant oval, 6 inches diameter, 13 ribs spirally twisted, ribs notched, or interrupted,

Spines only ci 5; lowest one broad curved downward, annulated towards tip; lateral pair smaller, upper pair smallest.

Pfeiffer (Abbildg. Cact p. 60) descr. 4 sorts of 7–8 radial and 1 central, robust, flat, hooked spine.

(= young plants, seedlings ?)

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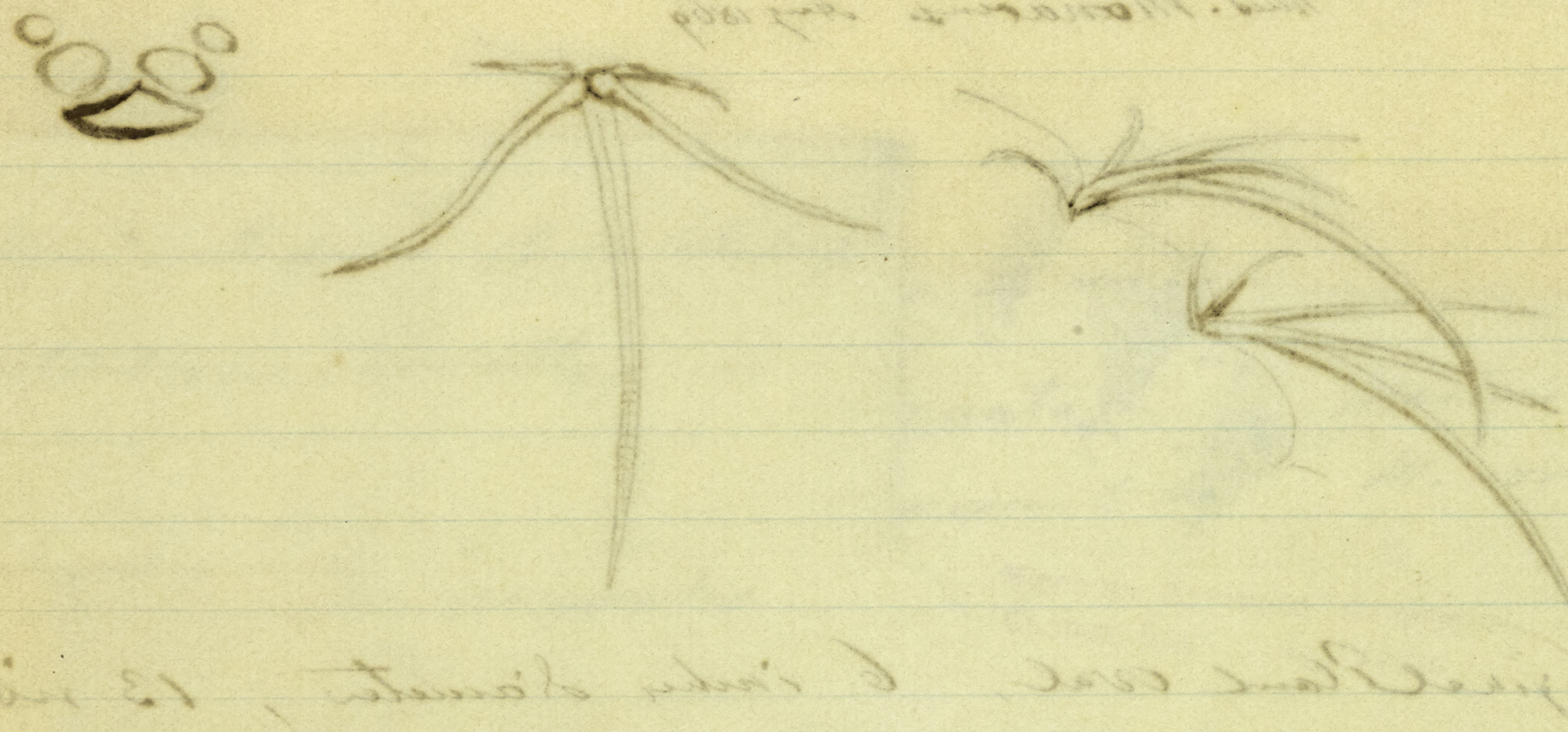
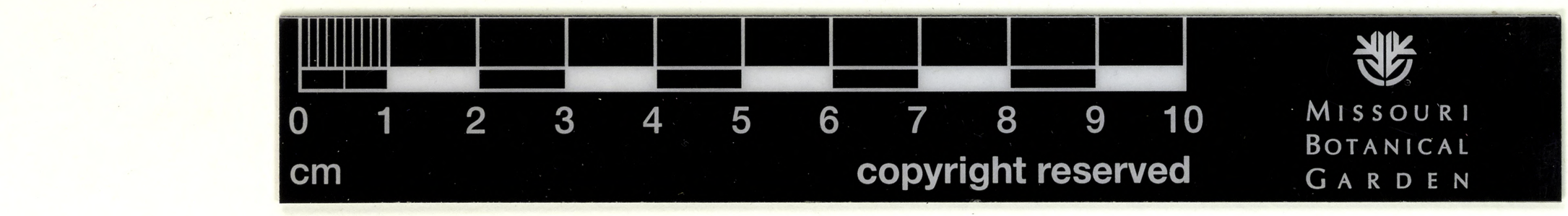
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